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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,086	01/25/2002	Bret H. Ashton	T6898	1431

20449 7590 01/15/2003

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EXAMINER
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LEE, JONG SUK

ART UNIT	PAPER NUMBER
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3673

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/057,086	ASHTON ET AL.
	Examiner	Art Unit
	Jong-Suk (James) Lee	3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-68 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-68 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 08 May 2002 is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.
 

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
  - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> .	6) <input type="checkbox"/> Other: _____

Serial Number: 10/057,086

Art Unit: 3673

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DETAILED ACTION

*Drawings*

1. The drawings are objected because the cross hatching for the elongated shaft and
2. composite wrapping in Fig. 2, cross-sectional view, is not shown. Correction is required.
  
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every
4. feature of the invention specified in the claims. Therefore, "an impregnator" in claim 2, line 3 and
5. claim 47, line 3; "a resin bath, rollers and doctor blades" in claim 3, line 2; "a carriage" in claim 4,
6. line 2 and claim 49, line 2; "a filament winding apparatus" in claim 16, line 4 must be shown or the
7. feature(s) canceled from the claim(s). No new matter should be entered.

*Specification*

8. 3. The title of the invention is not descriptive. A new title is required that is clearly indicative
9. of the invention to which the claims are directed. The title should be amended to be
10. commensurate with the claimed invention, i.e., **Wood Support Piling with Composite**
11. **Wrapping and Method for Reinforcing the Same.**

Serial Number: 10/057,086

Art Unit: 3673

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***Claim Rejections - 35 USC § 112***

2 4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

3 The specification shall conclude with one or more claims particularly pointing out and  
4 distinctly claiming the subject matter which the applicant regards as his invention.  
5

6 5. Claims 26, 41, 60, 65 and 66 are rejected under 35 U.S.C. 112, second paragraph, as  
7 being indefinite for failing to particularly point out and distinctly claim the subject matter which  
8 applicant regards as the invention.

9 Re claim 26: The limitation of the claim is duplicate of claim 22. This claims appears to be  
10 redundant.

11  
12 Re claim 41: The limitation of the claim is duplicate of claim 38. This claims appears to be  
13 redundant.

14  
15 Re claim 60: The limitation, "said plurality of strands" in lines 13-14 and "said resin" in  
16 line 24, respectively, lacks clear antecedent basis.

17  
18 Re claim 65: The limitation, "said plurality of strands" in lines 1-2 lacks clear antecedent  
19 basis. Claim 66 is also considered to be indefinite because it is dependent upon claim 65.

20 Appropriate correction is required.

Serial Number: 10/057,086

Art Unit: 3673

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*Claim Rejections - 35 USC § 102*

2 6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the  
3 basis for the rejections under this section made in this Office action:

4 A person shall be entitled to a patent unless --  
5 (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or  
6 on sale in this country, more than one year prior to the date of application for patent in the United States.  
7

8 7. Claims 17, 22, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by  
9 Kobatake et al (US 4,786,341).

10 Kobatake et al discloses a reinforced concrete column comprising of: a non-hollow  
11 elongate shaft/concrete column (1) having a length and an exterior surface extending along the  
12 length, a composite wrapping (2) encircling the exterior surface along at least a portion of the  
13 length and forming a layer of uniform thickness and materials and a single, seamless layer (see  
14 Figs. 3-7), wherein the composite wrapping applying a radial compressive force upon the elongate  
15 shaft and being bonded to the elongate shaft with epoxy-type prime coating material served as  
16 filament-wound fiber-reinforced bonding agent and inherently enhance the stiffness and/or  
17 reinforcement of the column (See Figs. 1-7; col.5, lines 10-45).

*Claim Rejections - 35 USC § 103*

20 8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness  
21 rejections set forth in this Office action:

**Serial Number: 10/057,086**

**Art Unit: 3673**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-12, 14-16, 18-21, 23-25, 29-42, 44-56, 58-63 and 66-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobatake et al in view of Owens et al (US 5,175,973).

The teachings of Kobatake et al have been discussed above.

Kobatake further discloses a method of manufacturing concrete structure, such as a column/support piling (1) comprising of: placing a support piling (1) on a filament winding apparatus; applying a resin to a plurality of fiber strands by passing the plurality of strands through an impregnator/resin impregnating bath (4) (see Fig. 1) and passing the strands through a carriage/roller and bobbin (5, 6); joining the plurality of strands to the support piling by winding the plurality of strands around with an angle; rotating the piling to form the composite wrapping (2) around the piling; allowing the resin to cure wherein the composite wrapping being bonded to the support piling (see Figs. 1-7; col.4, lines 35-68; col.5, lines 1-68; col.6, lines 1-68; col.7, lines 1-3 and 58-68; col.8, lines 1-24).

Serial Number: 10/057,086

Art Unit: 3673

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1                   However, Kobatake et al fails to disclose or fairly suggest the support piling as at least 10  
2                   feet long-wood piling/pole buried in the ground and having a moisture content and a multiple-tow  
3                   bundle of fibers/strands.

4                   Owens et al discloses a compression repair method and apparatus for a wood pole  
5                   comprising of a wood pole (4) having at least portion of the pole being wrapped around with a  
6                   fiber glass blanket/mat (3), the wood pole having a moisture content of 19 % for the best  
7                   condition of the wood piling/pole (see col.9, lines 60-68) and the portion of wrapped with the  
8                   blanket is partially buried in the ground as depicted in Fig. 1, the fiber glass blanket further  
9                   comprising of a plurality/multiple-tow bundle of strands/fibers (5-7) running at an angle of 45  
10                  degrees to 90 degrees for each bundles (see Fig. 2) and a coating of a composite resin (9) (see  
11                  Figs. 1-3; col.2, lines 39-49; col.4, lines 37-68; col.5, lines 41-58; col.6, lines 5-60; col.7, lines 46-  
12                  55).

13                  Therefore, in view of Stiles, it would have been obvious to one of the ordinary skill in the  
14                  art at the time the invention was made to replace the concrete piling of Kobatake et al with the  
15                  wood pole/piling in order to provide the variety of use for the fiber blanket or wrapping for the  
16                  reinforcement and repair of the support piling/pole.

17                  With respect to the variety of the ranges of the stiffness, moisture content of the wood  
18                  pile, a tension and angles of the fibers/strands while being wrapped around the pile, it would have  
19                  been obvious to one of the ordinary skill in the art at the time the invention was made to provide

Serial Number: 10/057,086

Art Unit: 3673

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such a range of the factors to the reinforcing fiber strands in order to achieve the best results for the piling/pole reinforcement and repair.

10. Claims 13, 28, 43, 57, 64 and 68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobatake et al, as modified by Owens et al, and further in view of Williams et al (S 5,516,236). The teachings of Kobatake et al modified by Owens et al have been discussed above.

The teachings of Kobatake et al modified by Owens et al fails to specifically disclose or fairly suggest a mechanical bond to the composite wrapping. Williams et al discloses a timber pile protection system comprising of a composite wrapping (2) bonded to the timber/wood pile (3) by means of a mechanical bond/straps (13) with nails (15) as depicted in Fig. 2 (see Figs. 1-3; col.3, lines 40-67; col.4, lines 1-56).

Therefore, in view of Williams et al, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to further modify the composite wrapping of Kobatake et al, as modified by Owens et al, by including the straps with nails in order to enhance the reinforcement of the composite wrapping to the wood piling/pole.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's

Serial Number: 10/057,086

Art Unit: 3673

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1 disclosure. Other references discloses a concrete pole and method of reinforcing with the  
2 composite strands/fiber mat, reinforcement of support elements and a fabric reinforced concrete  
3 column.

4 12. Any inquiry concerning this communication or earlier communications from the examiner  
5 should be directed to Jong-Suk (James) Lee whose telephone number is (703) 308-6777. The  
6 examiner can normally be reached between the hours of 6:30 AM to 3:00 PM Monday thru  
7 Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,  
8 Heather C. Shackelford, can be reached on (703) 308-2978. The fax phone number for this  
9 Group is (703) 305-3597.

10 Any inquiry of a general nature or relating to the status of this application or proceeding  
11 should be directed to the Group receptionist whose telephone number is (703) 308-2168.

12  
13 J. Lee /j1  
14 January 10, 2003  
15  
16  
17



Jong-Suk (James) Lee  
Patent Examiner  
Art Unit 3673